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ABSTRACT

Compiled in this resource are coding instructions, worksheets, and key punch sheets for use in the M.E.T.R.O.-APEX simulation, described in detail in documents ED 064 530 through ED 064 550. Air Pollution Exercise (APEX) is a computerized college and professional level "real world" simulation of a community with urban and rural problems, industrial activities, and air pollution difficulties. Persons using these sheets for game play will find it necessary to prepare duplicate copies of many of them, as indicated in the manuals for the game director and various players. (BL)

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CODING INSTRUCTIONS, WORKSHEETS, AND KEYPUNCH SHEETS
FOR M.E.T.R.O.-APEX SIMULATION

Service Division
Environmental Simulation Lab.
The University of Michigan

This document contains coding instructions, worksheets, and keypunch sheets for use in the M.E.T.R.O.-APEX simulation, described in detail in documents ED 064 530 through ED 064 550. Those using these sheets for game play will find it necessary to prepare duplicate copies of many of them, as indicated in manuals for game director and various players.

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INSTRUCTIONS TO COMPUTER OPERATOR

Game Director _____

Date Received _____

Computer Operator _____

Cycle Number _____

ADD CAPITAL PROJECTS AND/OR SPECIAL PROGRAMS _____

***PRESENT IDENT IS " _____ "

ENTER NEW DATE _____

TO PRINT APEX FILE CONTENTS _____

TO ENTER VALUES INTO VARIABLE FILES

File	Record	Element	I=1/R=0	Integer	Real
__ /	__ /	__ /	__ /	_____ /	_____ /
__ /	__ /	__ /	__ /	_____ /	_____ /
__ /	__ /	__ /	__ /	_____ /	_____ /

TO SUPPRESS ALL PRINT THIS CYCLE _____

ENTER NUMBERS OF PLAYING DEVELOPERS _____

ENTER NUMBERS OF PLAYING INDUSTRIALISTS _____

EXOFIRMS

Exofirm No.	SW 10 Option Force into AA	If Pol's fail to satisfy		If Dev's fail to satisfy	
		Force into AA	Bypass	Force into AA	Bypass

NEW US EMPLOYMENT GROWTH RATE (F5.0) _____

OVERRIDE AUTOMATIC DIVIDEND CALCULATION _____

	% of Net Worth	% of Net Profit	Cash Carryover	Cash Increase	Dollar Amount
Ind. #1					
Ind. #2					
Ind. #3					
Ind. #4					
Ind. #5					
Ind. #6					
Ind. #7					

SUPPRESS CITY POLITICIAN OUTPUT _____ SUPPRESS COUNTY OUTPUT _____

PRINT JURISDICTIONS _____

SUPPRESS CITY PLANNER OUTPUT _____ SUPPRESS COUNTY PLANNER OUTPUT _____

PRINT RECOMMENDATIONS FOR JURISDICTIONS _____

SUPPRESS PERCENTAGE DISTRIBUTION CHART _____

SUPPRESS DEVELOPED AND VACANT LAND TALBES _____

SUPPRESS SUMMARY TABLES _____

DATE TO BE PRINTED IN NEWSPAPER IS _____

NUMBER OF COPIES OF NEWSPAPER DESIRED _____

IS THERE AN ELECTION THIS CYCLE _____

PRINT CEM DIAGNOSTICS/CEM RESULTS _____

BYPASS LINKED ISSUES _____

BYPASS PRESET STATE AND NATIONAL ISSUES _____

BYPASS PRESET COUNTY AND LOCAL ISSUES _____

ENTER ISSUE NUMBERS FROM KEYBOARD FROM 1 TO 400, EOF AFTER EACH

CODING INSTRUCTION SHEETS

INSTRUCTIONS FOR CODING APCO KEYPUNCH SHEET

1. Plant Inspection

Code = PI

I-1 through I-15 are the firm numbers on which the inspections are ordered.

2. Emission Measurements

Code = EM

I-1 through I-15 are the firm numbers for which the measurements are ordered.

3. Air Quality

Code = AQ

F-1 = Limit for Particulates

F-2 = Limit for SO₂

F-3 = Limit for CO

F-4 = Limit for NO_x

F-5 = Limit for HC

4. Monitoring Stations

Code = MS

I-1 = Analysis Area (1-29)

I-2 = Station Type (1-5)

I-3 = Priority (1-2)

5. Summary of Budget Request

Code = BR

I-1 = 1 (County), 2 (Federal), 3 (Near Federal)

F-1 = \$ Public Education

F-2 = \$ Administration and Enforcement

F-3 = \$ Plant Inspections

F-4 = \$ Emission Measurements

F-5 = \$ Purchase, Upgrade AQ Monitoring Stations

F-6 = \$ AQ Monitoring Station Construction

If I-1 = 3:

F-1 = \$ Awarded First Year
F-2 = \$ Awarded Second Year
F-3 = \$ Awarded Third Year

FROM FEDERAL GRANT APPLICATION SECTION

6. Air Pollution Legislation

Code = AF

I-1 = Type of decision (1=Recommendation, 2=Rule, 3=Law ---as stated on keypunch sheet.

I-2 = Fine (even dollar amount) if change from preceding cycle. Can only be indicated on the two lines not crossed out. It cannot exceed \$9999

I-3 = Type of limits--correct numbers are indicated on keypunch sheet.

IF I-3 = 1 or 2:

F-1 = Particulates

F-2 = SO₂

F-3 = CO

F-4 = NO_x

F-5 = HC

IF I-3 = 3:

F-1 = Ringelmann 0-5

F-2 = Smoke and Odor

INSTRUCTIONS FOR FILLING DEVELOPER KEYPUNCH SHEET

1. Loan Payment (see worksheet section II-A)

Code = LP

I-1 = Land Developer numbers 1 through 7

I-2 = Loan Number as indicated on Worksheet

F-1 = \$ Amount of payment

2. Tax Payment (see worksheet section II-B)

Code = TP

I-1 = Land Developer numbers 1 through 7

I-2 = Jurisdiction to which paid: 1 = Central City
2 = Suburb
3 = Township 1
4 = Township 2
5 = County

F-1 = \$ Amount of payment

3. Campaign Contribution (see worksheet section II-C)

Code = CC

I-1 = Developer numbers 1 through 7

I-2 = Politician Number: 1 = Central City-Ward 1
2 = Central City-Ward 2
3 = Central City-Ward 3
4 = County Politician, Suburb
5 = County Politician, Township 1
6 = County Politician, Township 2
7 & 8 = County Politician, Central City
(at large)

O.

Bond or special millage number (must agree with I-2 of a BS Card for the same cycle)

F-1 = Dollars--precede with minus sign if opposed to Politician or referendum

4. Cash Transfer (see worksheet section III-D)

Code = CT

I-1 = Who from Land Developer 1

- I-2 = Who to Purchase:
 - 1 - 7 Land Developers
 - 8 - 13 Industrialist (corresponding to 1-7)
 - 15 - Market
 - 16 - Central City Politicians
 - 17 - County Politicians
 - 99 - Game Operator

F-1 = \$ Amount of transfer

5. Exofirm Investments (see worksheet section II-B)

Code = BI

- I-1 = Land Developer number
- I-2 = Exofirm number
- F-1 = \$ Amount of investment

6. Land Transfers (see worksheet sections I-E and II-F)

Code = LT

- I-1 = Seller (for land sales "section I-E" always developer 1-7)
 (for land purchases:
 - 1 - 7 = Land Developers
 - 8 - 13 = Industrialists
 - 15 = Market (non-game private)
 - 16 = Central City Politicians
 - 17 = County Politicians

I-2 = Analysis Area (1-29)

- I-3 = Present Use:
 - 0 = Vacant
 - 1 = Developed
 - 2 = Public Buildings, Parks, etc.

I-4 = Present Zoning Category:

- IF VACANT (I-3 = 0)
 - 1 = Residential/single
 - 2 = Residential/multiple
 - 3 = Commercial
 - 4 = Industrial
 - 5 = Office
 - 6 = Agricultural
 - IF DEVELOPED (I-3 = 1)
 - 1 = R-1 (single family residential-low density)
 - 2 = R-2 (single family residential-medium density)
 - 3 = R-3 (single family residential-high density)
 - 4 = M-1 (multiple family residential-low density)
 - 5 = M-2 (multiple family residential-medium density)
 - 6 = CL (commercial local)
 - 7 = CR (commercial regional)
 - 8 = IL (industrial local)
 - 9 = IR (industrial regional)
 - 10 = Offices
 - 11 = Agricultural
- Buyers may not develop in these categories

I-5 = Buyer: same code as I-1 for land purchases

- I-6 = Number of household units (this is used for developed residential only--I-3 = 1 and I-4 = between 1 and 5) Blank otherwise.
- F-1 = Number of acres if other than developed residential. Blank otherwise.
- F-2 = \$ Price offered by buyer for each unit or acre as appropriate. (This field is blank if buyer is "15" (the market)).

SPECIAL NOTE: IF THE LAND TRANSFER IS BETWEEN 2 GAMED PLAYERS--
ONLY THE SELLER RECORDS THE LAND ON THE CODING SHEET.

7. Development Costs (see section II-I on worksheet)

Code = DL

- I-1 = Land Developer 1 - 7
- I-2 = Analysis Area 1 - 29
- I-3 = Use same coding as for I-4 IF DEVELOPED under land transfers
- I-6 = Number of units being developed if residential
- F-1 = Number of acres being developed if non-residential
- } NOT BOTH

8. Loan Request (see worksheet section III-C)

Code = LR

- I-1 = Land Developer number 1 - 7
- I-2 = Number of years requested for repayment (if player indicates between 3-5 use the number 4, etc.)
- F-1 = \$ Amount requested

I-3 = Present zoning
0 = vacant
1 = developed
2 = public buildings, parks, etc.

I-4 = Present Zoning:

IF VACANT (I-3 = 0)
1 = residential/single
2 = residential/multiple
3 = commercial
4 = industrial
5 = office
6 = agricultural

IF DEVELOPED (I-3 = 1)
1 = R-1 (single family residential-low density)
2 = R-2 (single family residential-medium density)
3 = R-3 (single family residential-high density)
4 = M-1 (multiple family residential-low density)
5 = M-2 (multiple family residential-medium density)
6 = CL (commercial local)
7 = CR (commercial regional)
8 = IL (industrial local or endogenous)
9 = IR (industrial regional or exogenous)
10 = Office
11 = Agricultural

I-5 = New Zoning: use same coding as for IF VACANT above

I-6 = Number units rezoned if present zoning is improved residential (1...5)

OR

F-1 = Number acres rezoned if not improved residential

NOTE: WHEN DEVELOPED ~~PROPERTY~~ PROPERTY IS REZONED, IT BECOMES VACANT

INSTRUCTIONS FOR CODES POLITICIAN KEYPUNCH SHEET

1. Change in Operating Expenses (City or County) -- see worksheet section II-G.

Code = UV

I-1 = Politician Number: 1 = Central City
5 = County

I-2 = Budget Category:

- 1) Legislative and executive
- 2) Planning
- 3) Financial
- 4) Judicial
- 5) Fire and Police
- 6) Parks and recreation
- 7) Water and Sewage (total public works, County)
- 8) Refuse Collection (not County)
- 9) Streets and related
- 10) Employee Benefits
- 11) Public Relations
- 12) Library Fund
- 13) Public Health and related programs (County only)
- 14) APCO (County only)
- 15) Welfare - Hospital (County only)
- 17) Transfer to ~~Central~~ Fund
- 18) Transfer to ~~Ret~~ Retirement

F-1 = New percent

OR

F-2 = New dollar value

3. Normal Operating Millage (see worksheet section II-B)

Code = ~~UV~~

I-1 = Politician Number: 1 = Central City
5 = County

F-1 = Total New Operating Millage

4. Cash Transfer (see worksheet section II-F)

Code = ~~UV~~

I-1 = Who from: 1 - 7 Land Developers
8 - 14 Industrialists corresponding to 1 through 7
15 Home
16 Central City
17 County

I-2 = Who to: Same as Code I-1

F-1 = \$ Amount

5. Special Grant (see worksheet section III-E-d)

Code = SG

- I-1 = Politician Number: 1 = Central City
5 = County
- I-2 = Type of Grant: 1 = Operating Budget
2 = Capital Budget
- F-1 = \$ value of grant

6. Land Transfer (see worksheet section III-D)

Code = LT

- I-1 = Seller: 1 - 7 = Land Developers
8 - 14 = Industrialists (corresponding to 1 - 7)
15 = Market (non-game private)
16 = Central City
17 = County
- I-2 = Analysis Area (1-29)
- I-3 = Present Use: 0 = Vacant
1 = ~~Developed~~
2 = Public Buildings, Parks, etc.
- I-4 = Present Zoning Category:
- IF VACANT (I-3 = 0)
- 1 = Residential/single
 - 2 = Residential/multiple
 - 3 = Commercial
 - 4 = Industrial
 - 5 = Office
 - 6 = Agricultural
- IF DEVELOPED (I-3 = 1)
- 1 = R-1 (single family residential-low density)
 - 2 = R-2 (single family residential-medium density)
 - 3 = R-3 (single family residential-high density)
 - 4 = M-1 (multiple family residential-low density)
 - 5 = M-2 (multiple family residential-medium density)
 - 6 = CL (commercial local)
 - 7 = CR (commercial regional)
 - 8 = IL (industrial local)
 - 9 = IR (industrial regional)
 - 10 = Office
 - 11 = Agricultural
- Players may not develop in these three categories
- I-5 = Buyer: Same code as I-1
- I-6 = Number of households ~~wants~~ (this is used for developed residential only--if I-3 = 1 and I-4 = between 1 and 5) Blank otherwise.
- F-1 = Number of acres if other than developed residential. Blank otherwise.
- F-2 = \$ Price offered by buyer for each lot or acre as appropriate. (If buyer is M (I-5 = 15) leave blank).

7. ~~Bond~~, Special Millages (see worksheet sections II-C, II-D, II-E, III-A, III-B, IV-A, IV-B)

~~Code~~ = BS

~~I-1~~ = Politician Number: 1 = Central City
5 = County

~~I-2~~ = Unique number given to player by role advisor

~~I-3~~ = Purpose: 1 = Millage for water, sewer, streets
2 = Millage for parks, special project., misc.
3 = Bond for water, sewers, streets
4 = Bond for parks, misc.
5 = Raise current local limit

~~I-4~~ = Type: 1 = G.O. Bond
2 = Revenue Bond
3 = Special Millage
4 = Debt Retirement Millage (Code for purpose = 1 in I-3 field above)

~~I-5~~ = Number of years

~~I-6~~ = Elite Opinion Poll "Number for" minus "number against"

~~I-7~~ = Dollar if bond; Mills if I-4 = 3 or 4

~~I-8~~ = Promotional expenses related to this ~~referendum~~, in dollars.

~~I-9~~ = blank = no
1 = yes

8. ~~General~~ Improvements (see worksheet section III-C)

~~Code~~ = CP

~~I-1~~ = Politician Number: 1 = Central City
5 = County

~~I-2~~ = Location (Analysis Area 1 - 29; Wards 1 - 6 = 30 - 35; Jurisdictions 1 - 4 = 36 - 39; County = 40)

~~I-3~~ = Project Number, 1 - 120

~~I-4~~ = Bond Number to which project is tied, otherwise blank.

~~I-5~~ = Amount to be spent on project. (NOTE: must fall within range shown on project list and must be in even \$000.)

9. ~~Special~~ Program (see worksheet section II-D)

~~Code~~ = SP

~~I-1~~ = Politician Number

~~I-2~~ = Location--same as CP

~~I-3~~ = Program Number 1 - 40

~~I-4~~ = Millage Number

~~I-5~~ = 1 if project is already in existence.

I-4 = Zoning Category:

- 1 = residential/single
 - (I-3 = 0) 2 = residential/multiple
 - 3 = commercial
 - 4 = industrial
 - 5 = office
 - 6 = agricultural
- IF DEVELOPED -**
- (I-3 = 1) 1 = R-1 (single family residential-low density)
 - 2 = R-2 (single family residential-med density)
 - 3 = R-3 (single family residential-high density)
 - 4 = M-1 (multiple family residential-low density)
 - 5 = M-2 (multiple family residential-med density)
 - 6 = CL (commercial local)
 - 7 = CR (commercial regional)
 - 8 = IL (industrial local or endogenous)
 - 9 = IR (industrial regional or exogenous)
 - 10 = Office
 - 11 = Agricultural

I-5 = Buyer: Same code as I-1 for land purchases

I-6 = Number of household units (this is used for developed residential only--if I-3 = 1 and I-4 = between 1 and 5) Blank otherwise.

F-1 = Number of acres if other than developed residential. Blank otherwise.

F-2 = \$ Price offered by buyer for each unit or acre as appropriate. (This field is blank if buyer is "15" (the market).

SPECIAL NOTE: IF THE LAND TRANSFER IS BETWEEN 2 GAMED PLAYERS--
ONLY THE SELLER RECORDS THE LAND ON THE CODING SHEET.

3. Pollution Controls (see worksheet section II-F under Estimated Operating Costs)

Code = PC

I-1 = Industrialist number 8 - 13

I-2 = Process Number (1....8)

I-3 = Control Type (1.....)

4. Loan Payment (see worksheet section II-J under Estimated Operating Costs)

Code = LP

I-1 = Industrialist 8 - 13

I-2 = Loan Number as indicated on worksheet

F-1 = \$ Amount of payment

5. Tax Payment (see worksheet section II-K under Estimated Operating Costs)

Code = TP

I-1 = Industrialist 8 - 13

I-2 = Jurisdiction to which paid: 1 = Central City
2 = Suburb
3 = Township 1
4 = Township 2
5 = County

F-1 = \$ Amount of payment

6. Cash Transfers (see worksheet section II-L under Estimated Operating Costs)

Code = CT

I-1 = Who from: Industrialists 8 - 13

I-2 = Who to (Player*): 1 - 7 Land Developers
8 - 13 Industrialist
15 = Market
16 = City Politicians
17 = County Politicians
99 = Game Operator

F-1 = \$ Amount

7. Campaign Contribution (see worksheet section II-M under Estimated Operating Costs)

Code = CC

I-1 = Industrialist number 8 - 13

I-2 = Politician Number: 1 for Central City-Ward 1
2 for Central City-Ward 2
3 for Central City-Ward 3
4 for County Politician, Suburb
5 for County Politician, Township 1
6 for County Politician, Township 2
7 & 8 for County Politician, Central City (at large)

OR

Bond of special millage number (must agree with I-2 of BS Card for the same cycle)

F-1 = Dollars - precede with minus sign if opposed to Politician or referendum

8. Non-Pollution Expenditure

Code = NP

- I-1 = Industrialist number 8 - 13
- F-1 = Depreciation allowance (see worksheet section II-B under Estimated Net Profit)
- F-2 = Production Equipment Expansion (see worksheet section III-B under Capital Expenditure Estimation)
- F-3 = Building Expansion (see worksheet section III-C under Capital Expenditure Estimation)
- F-4 = Maintenance Expenditures (see worksheet section II-G under Estimated Operating Costs)

9. Loan Request (see worksheet section IV-C under Loan Estimations)

Code = LR

- I-1 = Industrialist number 8 - 13
- I-2 = Number of years requested for repayment (if player indicates between 3-5, use the number 4, etc.)
- F-1 = \$ Amount requested

INSTRUCTIONS FOR CODING ISSUE DECISIONS

An issue decision card contains one or more groups of ~~numbers~~ separated by commas. Each group of numbers gives the program ~~information~~ about one issue appearing in the newspaper that was printed at the end of the preceding cycle. The information is comprised of two required ~~entries~~; the issue number and the alternative acted upon by the deciding ~~agent~~ (a Politician or the Elite Opinion Poll). If the alternative action ~~required~~ that a project be funded, the bond or millage number associated ~~with~~ that project may be given.

The format for issue decisions is as follows: ~~iii~~(bbb), ~~iiia~~, ~~iiia~~(bbb), ... ~~iiia~~*

Where: ~~iii~~ is a 1 to 3 digit issue number
a is a single digit indicating the alternative chosen
(bbb) is an optional 3 digit bond/mill number

The card is "free-format"; that is, punching may begin in any column, and blank columns are ignored and may be used for spacing to increase legibility. Each group of numbers for a single issue is ~~separated~~ by a comma. However, the last group must be terminated by an asterisk (*), not a comma. A maximum of 40 issue decisions may be input in any ~~single cycle~~. If one card is not sufficient for all issue decisions, ~~decisions may~~ be punched on any number of additional cards. The terminating ~~asterisk~~ appears only after the last decision on the last card of the series. ~~The last~~ character on any one card must be either a comma or an asterisk. ~~Thus,~~ a number group for any one issue must appear on only one card—it ~~will~~ not be continued from one card to the next.

INSTRUCTIONS FOR CODING CANDIDATE ELECTION DATA CARDS

The following format is used for punching candidate election data cards.

Columns

1-2 Candidate Number. . . . A candidate number must be entered on each card. Incumbents should be assigned number 1-8. Corresponding numbers from 9-16 should be assigned to their opponents so that each matched pair are given numbers 8 apart; that is, opponent 12 runs against incumbent 4, etc. The assignment of numbers to incumbents is arbitrary. Do not punch cards for opponents if there is not a card for the corresponding incumbent.

- 3
- a) For incumbents (01-08 in columns 1-2) this column indicates whether the opponent is real or simulated:
 - 1 = gamed opponent (real)
 - 2 = simulated opponent
 - b) For gamed challengers (09-16 in columns 1-2) this column should be blank, For simulated challengers this column designates the opponent type:
 - 1 = Conservative
 - 2 = Moderate Republican
 - 3 = Labor Liberal
 - 4 = New Left Liberal
 - 5 = Working Class Conservative
 - 6 = Ultra-Conservative
 - 7 = Business Candidate
 - 8 = Black Candidate
 - 9 = Reform Candidate

4-8 Party Support. This entry is included only for incumbents. It is the major discretionary variable under the control of the operator. Some number between

1 and 60 is entered designating the percentage of the vote, up to 60%, being automatically to the absent. The entry can be determined by apportioning the 60% in accordance to a hand vote of gamed players, operator's whim or any other suitable method. If the entry is left blank, the machine sets the appropriate variable to 30.

9-28

Candidate Name. A name up to twenty characters long is entered here to be printed with the election results in the newspaper. Names should be entered for simulated as well as gamed opponents. For example, a conservative might be called Richmond Q. Stuffshirt.

29-80

Issue Number, Candidate Stand on Issue, and Candidate Stress on Issue. The form follows that for issue decision cards---iia(bb)--where iia is a 1 to 3 digit issue number, "a" is the alternative chosen and "bb" is the percent of campaign funds spent stressing the stand taken on that issue. These entries are free format and up to 40 issue decisions may be entered. Additional cards may be used as needed with the continuation card starting in column 1.

An asterisk is used to designate the end of the sequence for a given candidate. Entries should be made for only those issues for which the candidate casts a vote. Note that these columns should be left blank for simulated opponents. Also, for unstressed issues (issues which would have zero in parentheses) the parentheses may be omitted.

WORKSHEETS

Air Pollution Control Officer

Cycle Number _____

II. BUDGET REQUEST

A. Public Education Expenditures

	Programs	Costs
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
Total Public Education Expenditures		\$ _____

B. Administration and Enforcement

Administration

	Programs	Costs
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
Sub Total - Administration		\$ _____

Enforcement

	Programs	Costs
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
Sub Total - Enforcement		\$ _____

Total - Administration & Enforcement \$ _____

3. Monitoring Station Reporting Levels

Regulates*	SO ₂ *	CO	NO _x *	HC*

F. Summary Budget Request

	Total	County*	Federal*
Public Information			
Administration & Enforce.			
Plant Operations			
Emission Measurements			
A.Q. Stations Upgrade			
A.Q. Stations Operation			
Total			

Signature of Authorizing County Official _____

III. FEDERAL GRANT APPLICATION

Approved Federal Funds in \$

	Cycle*	Cycle*	Cycle*
1. Original			
2. Supplemental			

IV. AIR POLLUTION LEGISLATION

A. County Regulations

Initial of Co. Board	Max. Fine Level*	Lbs/Hr.*					Lbs/1000 Lbs Prod.*					Smoke Odor*
		Part	SO ₂	CO	NO _x	HC	Part	SO ₂	CO	NO _x	HC	

B. Recommendations to State for Regulations

III. ESTIMATED EXPENDITURES

A. Loan Payments

Loan No. *	Amount*
1.	
2.	
3.	
4.	
5.	

Total Loan Payments \$ _____

B. Property Taxes

Jurisdiction*	Amount*
1.	
2.	
3.	
4.	
5.	

Total Property Taxes \$ _____

C. Campaign Contributions

Pol/Bond/Mill #**	Amount*	For/Against
1.		
2.		
3.		
4.		
5.		
6.		

Total Campaign Contributions \$ _____

D. Cash Transfers (to other players)

Player*	Amount*	Reason
1.		
2.		
3.		
4.		
5.		

Total Cash Transfers \$ _____

E. Exofirm Investments

	Exofirm No.*	Preferred Location	Amount*
1.			
2.			
3.			
4.			
5.			

Total Exofirm Investments \$ _____

F. Land Purchases

	Seller*	AA*	Vac/Dev.*	Zoning Cat.*	No. of Units*	No. of Acres*	Price/Unit Price/Acre*	Total Price
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

Total Land Purchases \$ _____

G. Zoning Application Fees

	AA	Vac/Dev.	From?	To?	No. of Units or	No. of Acres	Fee at \$100 per application
1.							
2.							
3.							
4.							
5.							
6.							

Total Zoning Application Fees \$ _____

H. Land Clearance Costs (Demolition)

	AA	Total Value of Developed Property being Rezoned	Demo. Rate	Land Clearance Cost
1.			.05	
2.			.05	
3.			.05	
4.			.05	
5.			.05	
6.			.05	

Total Land Clearance Costs \$ _____

I. ~~Building Development~~ Costs

	AA*	Development Type*	No. of Units*	or	No. of Acres*	Cost/Unit Cost/Acre	Total Cost
1.							
2.							
3.							
4.							
5.							
6.							

Total Building Development Costs \$ _____

J. Vacant Land Improvement Costs

	AA	Vacant Land Being Developed No. of Units	No. of Acres	Cost/Unit Cost/Acre	Total Cost
1.					
2.					
3.					
4.					
5.					
6.					

Total Vacant Land Improvement Costs \$ _____

TOTAL ESTIMATED ~~EXPENDITURES~~ EXPENDITURES \$ _____

IV. ESTIMATED LOANS

A. Cash on Hand plus 5% Interest \$ _____

B. Total Estimated Expenditures - \$ _____

C. Loan Requests

	Years for Repayment*	Amt. of Loan Requested*
1.		
2.		
3.		

Total Loan Requests \$ _____

III. RECOMMENDATIONS FOR SPECIAL PROGRAMS

Location*	Program Number*	Cost per Year	Project in Existence?*

Central City Politician ()

Cycle Number _____

County Politician ()

II. OPERATING BUDGET

- A. Estimation of Revenue Generation through Increases in the Millage
1. Item "F" of "Operating Budget Revenue Generation" _____
 2. Divide Line 1 by 1000 for 1 mill increase _____
 3. Multiply Line 2 by millage increase x _____
 4. Expected increase in revenues _____
- B. Change in Operating Millage

Change the Operating Millage		Total New Millage Rate*
Yes	No	

C. Raise Local Limit

Number of Years to Run*	Millage Increase*	Promotion Expenditures* (if any)	If voted down, should it be resubmitted*	
			Yes	No

This requires a public referendum. You need to get the opinions of as many players in the room as is possible. The form for polling the gamed players is found in section V of the worksheet.

D. Special Programs

New Special Program Number*	Location*	Method of Funding		Cost per Year	Is Required Capital Proj in Existence?*
		Operating Budget	Special Millage*		

Total Cost of Special Programs

\$ _____

E. Special Millages

Special Millage	No. of Years Special Millage Runs*	No. of Mills*	Promotional Expenditures* (if any)	If voted down, should it be resubmitted?*	
				Yes	No
1					
2					
3					
4					
5					

This requires a separate public referendum. You need to get the opinions of as many players in the room as is possible. The form for polling the gamed players is found in section V of the worksheet.

F. Cash Transfers (to other players)

Player*	Amount*	Reason

G. Change in Operating Expenditures

1. City Change in Operating Expenditures

<u>Category:</u>	% Total Revenue*	\$ Amount*
(A.) Legislative and Executive	XXXXXXXXXX OR	_____
(B.) Planning	_____	_____
(C.) Financial	_____	_____
(D.) Judicial	_____	_____
(E.) Fire and Police	_____	_____
(F.) Parks & Recreation--salaries & maintenance	_____	_____
(G.) Water & Sewers--salaries & maintenance	_____	_____
(H.) Refuse Collection	_____	_____
(I.) Streets--salaries & maintenance	_____	_____
(J.) Employee Benefits	_____	_____
(K.) Public Relations (Promotion Expenditures)		
(1) Special Debt Retirement Millage	_____	_____
(2) General Obligation Bonds	+ _____	_____
(3) Raising Local Operating Millage Limit	+ _____	_____
(4) Special Millages	+ _____	_____
Total Promotional Expenditures	_____	_____
	└──────────────────┘	└──────────────────┘
(L.) Library	_____	_____
(M.) Check Payments to Other Players (Cash Transfers to other players)	XXXXXXXXXX	_____
(N.) Special Programs		
(1) New Special Programs Annual Cost	_____	_____
(2) Continuing Special Programs on Listing (those with asterisks)	+ _____	_____
Total Cost of Special Programs	_____	_____
	└──────────────────┘	└──────────────────┘
(O.) Transfer to Capital Fund	XXXXXXXXXX	_____
(P.) Transfer to Debt Retirement	XXXXXXXXXX	_____

XXXXXXXXXX - percentages do not apply to those categories. Please enter dollar amount only.

2. County Change in Operating Expenditures

<u>Category:</u>	% Total Revenue*	\$ Amount*
(A.) Legislative & Administrative (i.e., Planning, Financial, etc.)	XXXXXXXXXX	_____
(B.) Judicial	_____	_____
(C.) Public Safety	_____	_____
(D.) Parks Authority	_____	_____
(E.) Public Works Maintenance	_____	_____
(F.) Public Health	_____	_____
(G.) APCO (Budget Worksheet)	XXXXXXXXXX	_____
(H.) Welfare and Hospitalization	_____	_____
(I.) Road and Street Maintenance	_____	_____
(J.) Employee Benefits	_____	_____
(K.) Public Relations (Promotional Expenditures)		
(1) Special Debt Retirement Millage	_____	_____
(2) General Obligation Bonds	+ _____	_____
(3) Raising Local Operating Millage Limit	+ _____	_____
(4) Special Millages	+ _____	_____
Total Promotional Expenditures	_____	_____
	└──────────────────┘	└──────────────────┘
(L.) Library	_____	_____
(M.) Check Payments to other Players (Cash Transfers to other Players)	XXXXXXXXXX	_____
(N.) Special Programs		
(1) New Special Programs Annual Cost	_____	_____
(2) Continuing Special Programs on Listing (those with astericks)	+ _____	_____
Total Cost of Special Programs	_____	_____
	└──────────────────┘	└──────────────────┘
(O.) Transfer to Capital Fund	XXXXXXXXXX	_____
(P.) Transfer to Debt Retirement	XXXXXXXXXX	_____
(Q.) Transfer to Roads Capital Fund	20% of Road Commission Revenues	_____

XXXXXXXXXX - percentages do not apply to those categories. Please enter dollar amount only.

III. CAPITAL BUDGET

A. Revenue Bonds

Revenue Bond	Budget Category*	Cycle for Revenue Bond to Run*	Dollars*
1			
2			
3			
4			
5			
6			
7			
8			
9			

Total for all Revenue Bonds \$ _____

B. General Obligation Bonds

General Obligation Bond	Budget Category*	Cycles to Run*	Amount*	Promotion Expenditure (if any)*	Re-Submit*
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Total for All General Obligation Bonds \$ _____

BE SURE TO LIST ALL PROJECTS ON NEXT PAGE!

Each General Obligation Bond requires a separate public referendum. You need to get the opinions of as many players in the room as is possible. The form for polling the gamed players is found in section V of the worksheet.

(d) New Special Grants
 State Money
 Federal Money + _____
 Sum of outside funds _____

(e) Total Capital Improvement Fund _____

Transfer this amount to Item 9 below

2. Expenditures for Capital ~~Expend~~

(a) Total Costs of all ~~new~~ ~~proj-~~
 ects (taken from Capital
 Improvement Projects) _____

(b) Total Annual Cost of ~~new~~
 Projects (taken from
 Capital Improvements) - _____

Encumbered Funds for new Projects _____

(c) Sum of annual costs on
 printout (those with
 asterisks) _____

(d) Total annual costs of ~~new~~
 projects + _____

(e) Total Disbursements
 (other than land) _____

(f) Encumbered funds for ~~proj-~~
 ects
 not yet completed
 (item 11 on listing) _____

(g) Sum of annual cost on
 printout (those with
 asterisks) - _____

SUB TOTAL + _____

(h) Encumbered funds for all
 new and old projects _____

(i) Total Capital Improvement fund
 (from previous page) _____

(j) Total land purchases this cycle - _____

SUB TOTAL _____

(k) Total Disbursements (other than land) - _____

Balance of Capital Funds for Next Cycle _____

x .06

(l) 6% Interest on Balance _____

(m) Total Carried to next cycle _____

(n) Encumbered Fund for all old & new projects _____

(o) Unencumbered Balance _____

IV. DEBT RETIREMENT FUND

- A. "Total Debt Retirement Funds Available for Cycle" _____
- B. Total payment due for all general obligation bonds - _____

- Total _____

Special Debt Retirement Millage

Number of Years to Run*	Millage Rate*	Promotion Expenditures if any*	If voted down, should it be resubmitted?*

*Each Special Debt Retirement Millage requires a separate public referendum. *You need to get the opinions of as many players in the room as is possible. The form for polling the gamed players is found in section V of the worksheet.*

Industrialist Number _____

Cycle Number _____

II. PROFIT AND INCOME TAX ESTIMATION

ESTIMATED INCOME

A. Interest on Cash Available

1. Cash Available _____
 2. Interest Rate x .05
 Total Interest on Cash Available \$ _____

B. Product Sales

1. Sales Price _____ *
 2. Estimated Sales (units) x _____ *
 3. Estimated Sales (\$) \$ _____
 4. Estimated Sales (units) _____
 5. Desired Inventory Carryover + _____
 6. Total Units Needed _____
 7. Actual Inventory Carryover - _____
 8. Estimated Production Level _____ *

C. Cash Transfers (from other players)

	Player	Amount	Reason
1.			
2.			
3.			
4.			
5.			

Total Cash Transfers \$ _____

D. Land Sales

	AA*	Vacant/ Dev.*	Zoning Cat.*	Buyer*	No. of Units*	or Acres*	Price/Acre Price/Unit*	Total Price
1.								
2.								
3.								
4.								
5.								

Total Land Sales + \$ _____

TOTAL ESTIMATED INCOME \$ _____

ESTIMATED OPERATING COSTS

A. Labor

1. Estimated Production Level _____
 2. Employment/Production Ratio x _____
 3. No. of Employees _____
 4. Average Annual Wage x _____
 Total Labor Cost \$ _____

B. Materials

1. Estimated Production Level _____
 2. Unit Material Costs x _____
 Total Material Cost \$ _____

C. Fuel

1. Fuel Type _____*

2. Estimated Production Level _____

3. Unit Fuel Cost x _____

Total Fuel Cost \$ _____

D. General Administration

1. Estimated Production Level _____

2. Unit General Administration Cost x _____

Total General Administration Cost \$ _____

E. Inventory Carrying Costs

1. Desired Inventory Carryover _____

2. Unit Inventory Carrying Costs x _____

Total Inventory Carrying Costs \$ _____

F. Pollution Controls Operation

	Production Sub-Process No.*	Control Type	Control Number*	Annual Operating Cost*
1.				
2.				
3.				
4.				
5.				

Total Pollution Controls Operating Costs \$ _____

ESTIMATED OPERATING COSTS (cont.)

G. Plant Maintenance \$ _____ *

H. Consultants - Pollution Emission Data \$ _____ *

I. Consultants - Control Systems Data \$ _____ *

J. Loan Payments

Loan No.*	Amount*
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____

Total Loan Payments \$ _____

K. Property Taxes

Jurisdiction*	Amount*
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____

Total Property Taxes \$ _____

L. Cash Transfers (to other players)

Player*	Amount*	Reason
1.	_____	_____
2.	_____	_____
3.	_____	_____

Total Cash Transfers \$ _____

M. Campaign Contributions

Pol/Bond/Mill No.*	Amount*	For or Against
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____

Total Campaign Contributions \$ _____

ESTIMATED OPERATING COSTS (cont.)

N. Zoning Application Fees and/or Demolition Costs

	A.A.	Vac/ Dev.	From	To	No. of Units	or	No. of Acres	Fee
1.								
2.								
3.								
4.								

Total Zoning Application Fees \$ _____

1. Value of Dev. Land being Rezoned _____

2. Rate of Demolition Fees x .05

Total Demolition Costs + \$ _____

TOTAL ESTIMATED OPERATING COSTS \$ _____

ESTIMATED NET PROFIT

A. Gross Profit

1. Total Estimated Income _____

2. Total Estimated Operating Costs - _____

3. Estimated Gross Profit \$ _____

B. Tax Depreciation Allowance

1. Maximum Tax Depreciation Allowance _____

2. Desired Tax Depreciation Allowance - \$ _____*

C. Total Taxable Income

\$ _____

D. Federal and State Income Taxes

1. Total Taxable Income \$ _____

2. Fed-State Income Tax Rate x \$.55

Total Federal and State Income Taxes \$ _____

E. Estimated Net Profit

1. Estimated Gross Profit \$ _____

2. Total Federal & State Income Tax - _____

TOTAL ESTIMATED NEW PROFIT \$ _____

RECOMMENDED DIVIDENDS

\$ _____

Explanation for Board of Directors: _____

III. CAPITAL EXPENDITURE ESTIMATION

A. Desired Increase in Maximum Production Capacity _____

B. Production Equipment Expansion \$ _____ *

C. Building Expansion \$ _____ *

D. Land Purchases

	Seller*	AA*	Vacant/ Dev.*	Zoning Cat.*	No. of Units*	or	No. of Acres*	Price/Acre Price/Unit*	Total Price
1.									
2.									
3.									
4.									
5.									

Total Land Purchases \$ _____

E. Pollution Control Equipment

	Process No.*	Control Type	Control Number*	Initial Cost
1.				
2.				
3.				
4.				
5.				

Total Pollution Control Equipment Costs + \$ _____

TOTAL CAPITAL EXPENDITURES \$ _____

IV. LOAN ESTIMATIONS

A. Cash on Hand

1. Cash Available \$ _____

2. 5% Interest on Cash Available \$ _____

3. Cash Transfers (from others) + \$ _____

Total Cash on Hand \$ _____

B. Initial Cash Requirements

1. Property Taxes \$ _____

2. Loan Payments (currently due) \$ _____

3. Capital Expenditures \$ _____

4. Campaign Contributions \$ _____

5. Cash Transfers (to others) + \$ _____

Total Initial Cash Requirements \$ _____

C. Loan Requests

	<u>Years for Repayment*</u>	<u>Amount of Loan*</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____

Total Loan Requests

\$ _____

KEYPUNCH SHEETS

KEYPUNCH FOR APCO ROLE

Cycle Number _____

1. Plant Inspection (PI)

Priority	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15
	I-1	I-2	I-3	I-4	I-5	I-6	I-7	I-8	I-9	I-10	I-11	I-12	I-13	I-14	I-15

2. Emission Measurements (EM)

Priority	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15
	I-1	I-2	I-3	I-4	I-5	I-6	I-7	I-8	I-9	I-10	I-11	I-12	I-13	I-14	I-15

3. Air Quality (AQ)

Particulates (F-1)	SO ₂ (F-2)	CO (F-3)	NO _x (F-4)	HC (F-5)

4. Monitoring Stations (MS)

A.A. (I-1)	Type Station (I-2)	Priority (I-3)
		1
		2
		3
		4
		5
		6

A.A. (I-1)	Type Station (I-2)	Priority (I-3)
		7
		8
		9
		10
		11
		12

5. Budget Request (BR)

(I-1)	Pub. Ed. (F-1)	Admin/Enf. (F-2)	Plant Insp. (F-3)	Emis. Meas. (F-4)	MS/Purchase & Upgrade (F-5)	M.S. Oper. (F-6)
1=(County)						
2=(Fed)						
3=(3YrFed)						

6. Air Pollution Legislation (AF)

	Fines (I-2)	(I-3)	Emission Rates in lbs/hr.				
			Part. (F-1)	SO ₂ (F-2)	CO (F-3)	NO _x (F-4)	HC (F-5)
Recom	1	1					
Co. Reg	2	1					
State Reg	3	1					

	Fines (I-2)	(I-3)	Emission Rates in lbs/1000hrs					
			Part.	SO ₂	CO	NO _x	HC	
			(F-1)	(F-2)	(F-3)	(F-4)	(F-5)	
Recom	1	///////	2					
Co. Reg	2	///////	2					
State Reg	3	///////	2					

	Fines (I-2)	(I-3)	Smoke	Odor
			Ring. No.	Odor Units
			(F-1)	(F-2)
Recom	1	///////	3	
Co. Reg	2	///////	3	
State Reg	3	///////	3	

KEYPUNCH FOR DEVELOPER ROLE

Developer Number _____

Cycle Number _____

1. Loan Payment (LP)

Dev. No. (I-1)	Loan No. (I-2)	Amount (F-1)

2. Tax Payment (TP)

Dev. No. (I-1)	Juris. (I-2)	Amount (F-1)

3. Campaign Contribution (CC)

Dev. No. (I-1)	Pol/Bond/Mill No. (I-2)	Amount (F-1)

4. Cash Transfer (CT)

From (I-1)	To (I-2)	Amount (F-1)

5. Exofirm Investment (BI)

Dev. No. (I-1)	Exo. No. (I-2)	Amount (F-1)	Location

6. Land Transfer (LT)

Seller (I-1)	AA (I-2)	Vac/ Dev. (I-3)	Zone Cat. (I-4)	Buyer (I-5)	No. of Units (I-6)	or	No. of Acres (F-1)	Price/Acre Price/Unit (F-2)

7. Development Costs (DL)

8. Loan Request (LR)

Dev. No. (I-1)	AA (I-2)	Dev. Type (I-3)	No. of Units (I-6)	or	No. of Acres (F-1)

Dev. No. (I-1)	Yrs. (I-2)	Amount (F-1)

KEYPUNCH FOR POLITICIAN ROLE

Central City Politician ()

Cycle Number _____

County Politician ()

1. City Change in Operating Expenses (UV)

3. Normal Operating Millage (RM)

	Pol. No. (I-1)	Category (I-2)	% Total Revenue (F-1)	Amount (F-2)
A	1	1	XXXXXXXX	
B	1	2		
C	1	3		
D	1	4		
E	1	5		
F	1	6		
G	1	7		
H	1	8		
I	1	9		
J	1	10		
K	1	11		
L	1	12		
O	1	17	XXXXXXXX	
P	1	18	XXXXXXXX	

Pol. No. (I-1)	Total Operating Millage (F-1)

4. Cash Transfer (CT)

From (I-1)	To (I-2)	Amount (F-1)

5. Special Grant (SG)

Pol. No. (I-1)	Type (I-2)	Amount (F-1)

O R

2. County Change in Operating Expenses (UV)

	Pol. No. (I-1)	Category (I-2)	% Total Revenue (F-1)	Amount (F-2)
A	5	1	XXXXXX	
B	5	4		
C	5	5		
D	5	6		
E	5	7		
F	5	13		
H	5	15		
I	5	9		
J	5	10		
K	5	11		
L	5	12		
O	5	17	XXXXXXXX	
P	5	18	XXXXXXXX	

6. Land Transfer (LT)

Seller (I-1)	AA (I-2)	Vac/Dev (I-3)	Zone/Cate (I-4)	Buyer (I-5)	No. Units or No. Acres (I-6)	Price/Acre Price/Unit (F-1)	Price/Acre Price/Unit (F-2)

KEYPUNCH FOR INDUSTRIALIST ROLE

Industrialist Number _____

Cycle Number _____

1. Production Level (PL)

Indust. No. (I-1)	Fuel (I-2)	Emission Cons (I-3)	Control Cons (I-4)	Prod. Level (F-1)	Sales Price (F-2)	Estimated Units Units (F-3)

2. Land Transfer (LT)

Seller (I-1)	AA (I-2)	Vacant/ Dev. (I-3)	Zoning Cat. (I-4)	Buyer (I-5)	No. of Units (I-6)	or Acres (F-1)	Price/Acre Price/Unit (F-2)

3. Cash Transfer (CT)

From (I-1)	To (I-2)	Amount (F-1)

4. Pollution Controls (PC)

Ind. No. (I-1)	Process No. (I-2)	Control No. (I-3)

5. Loan Payment (LP)

Ind. No. (I-1)	Loan No. (I-2)	Amount (F-1)

6. Tax Payment (TP)

Ind. No. (I-1)	Juris. (I-2)	Amount (F-1)

7. Non-Pollution Expenditure (NP)

Ind. No. (I-1)	Depreciation Allowance (F-1)	Equipment Expansion (F-2)	Building Expansion (F-3)	Plant Maintenance (F-4)

8. Campaign Contribution (CC)

Ind. No. (I-1)	Pol/Bond/ Mill No. (I-2)	Amount (F-1)

9. Loan Request (LR)

Ind. No. (I-1)	No. Years (I-2)	Amount (F-1)

10. Recommended Dividends

KEYPUNCH FOR CANDIDATE ELECTION MODEL

Cycle Number _____

INCUMBENTS

Candidate No.	Opponent: Gamed = 1 Sim. = 2	Party Support	Candidate Name
Col 1-2	Col 3	1. - 60. Col 4-8	Col 9-28
01 (Ward 1)			
02 (Ward 2)			
03 (Ward 3)			
04 (Suburb)			
05 (Twn. 1)			
06 (Twn. 2)			
07 (Co. CC.)			
08 (Co. CC.)			

OPPONENTS

Candidate No.	If Sim. - Opp. Type	Party Support	Candidate Name
Col 1-2	Col 3	BLANK	Col 9-28
09 (Ward 1)			
10 (Ward 2)			
11 (Ward 3)			
12 (Suburb)			
13 (Twn. 1)			
14 (Twn. 2)			
15 (Co. CC.)			
16 (Co. CC.)			

Cand. No.	ISS A (S)								
Ward 1									
Ward 2									
Ward 3									
Suburb									
Twn. 1									
Twn. 2									
Co.CC.									
Co.CC.									
Ward 1									
Ward 2									
Ward 3									
Suburb									
Twn. 1									
Twn. 2									
Co.CC.									
Co.CC.									

INCUMBENTS

OPPONENTS

Cand. No.	ISS A (S)								
Ward 1									
Ward 2									
Ward 3									
Suburb									
Twn. 1									
Twn. 2									
Co.CC.									
Co.CC.									
Ward 1									
Ward 2									
Ward 3									
Suburb									
Twn. 1									
Twn. 2									
Co.CC.									
Co.CC.									

INCUMBENTS

OPPONENTS



OTHER FORMS

IV. REZONING APPLICATION

A. Owner

Developer #1 ()	Industrialist #1 ()	General Market ()
Developer #2 ()	Industrialist #2 ()	Central City ()
Developer #3 ()	Industrialist #3 ()	County ()
Developer #4 ()	Industrialist #4 ()	
Developer #5 ()	Industrialist #5 ()	
Developer #6 ()	Industrialist #6 ()	
Developer #7 ()	Industrialist #7 ()	

B. Analysis Area _____

C. Present Development

Vacant () Developed () Public Bldgs., Park, Etc. ()

D. Present Land Use

<i>Developed Residential</i>	<i>Insert No. Units</i>	/	<i>Vacant</i>	<i>Insert No. Acres</i>
R-1 (low density, high cost)	_____	/	R (single-family)	_____
R-2 (med. density, med cost)	_____	/	M (multiple-family)	_____
R-3 (high density, low cost)	_____	/	C (commercial)	_____
M-1 (low density, high cost)	_____	/	I (industrial)	_____
M-2 (med. density, low cost)	_____	/	O (bureaucratic)	_____
		/	A (agricultural)	_____

Developed Non-Residential *Insert
No. Acres*

LS (local shopping)	_____
RS (regional shopping, office)	_____
I (endogenous industry)	_____
O (exogenous industry)	_____
O (exogenous bureaucratic)	_____
A (active farming)	_____

NOTE: ONLY ONE LINE SHOULD BE FILLED IN UNDER "PRESENT LAND USE"

E. Proposed Zoning

R (single-family residential)	_____	I (industrial)	_____
M (multiple-family residential)	_____	O (bureaucratic)	_____
C (commercial)	_____	A (agricultural)	_____

F. Planners Recommendation

Politicians Decision

Final Outcome

Yes	No	Yes	No	
_____	_____	_____	_____	_____
_____	_____	_____	_____	Cycle Number
_____	_____	_____	_____	_____

